

## **Program Project Description:**

The EPA's Superfund Remedial program protects the American public and the nation's resources by assessing and cleaning up some of the most contaminated sites in the United States. As a result, communities are safer, healthier, and realize economic benefits. The agency's actions also protect and restore the nation's precious and limited groundwater and surface water resources. In addition, some construction activities help to build, replace, or sustain critical components of the nation's infrastructure (i.e. water, transportation, and recreation). The Superfund Remedial program is responsible for conducting longer term cleanup work, as well as overseeing response work conducted by potentially responsible parties (PRPs). Cleanup activities include characterizing the degree and scope of contamination from releases of contaminants to the environment, developing cleanup strategies, designing and constructing remedies, conducting long-term operation, and monitoring of certain remedies. The Superfund Remedial program, by actively implementing its "Green Remediation Strategy," minimizes the environmental footprint of its cleanup activities. In addition, the EPA partners with state, local, and Tribal governments to cleanup Superfund sites and provides funding through state and Tribal cleanup programs, which support site assessment work, provide payroll for staff, and document review activities. Finally, the program provides resources to communities through Technical Assistance Grants (TAGs) to facilitate their engagement on National Priority List (NPL) Superfund sites.

Superfund sites exist in thousands of communities across the United States, ranging from remote rural areas to large urban settings. Many sites are located in economically distressed communities that suffer from disproportionate and adverse environmental exposures. The size and complexity of Superfund sites also vary widely. A site may have a very small footprint or may cover thousands of acres (land and/or water bodies). Contaminated media at a Superfund site might include soils, buildings, sediments, surface water, air, and/or groundwater. Cost and time to clean up Superfund sites vary widely depending on the degree, type, and location of contamination. On average, a typical NPL site will cost around \$15 million; however some will cost more than \$100 million by the time they are completed. A few sites, such as the Bunker Hill and Libby Asbestos Sites, have the potential to exceed \$500 million. Cleanup actions can take from a few months for a relatively straight-forward soil excavation or capping remedy to multiple decades for complex, area-wide groundwater, sediment, or mining remedies.

While there is no single way to characterize communities that are located near Superfund NPL sites, the EPA analyzed the latest census data and found that approximately 49 million people live within 3 miles of Superfund final and proposed NPL sites, as well as non-NPL Superfund Alternative Agreement sites (roughly 16 percent of the U.S. population).<sup>1</sup> This population is predominantly minority, low income, linguistically isolated, and less likely to have a high school education than the U.S. population as a whole. As a result, these communities may have fewer resources with which to address concerns about their health and environment.

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<sup>1</sup> U.S. EPA, Office of Solid Waste and Emergency Response Estimate. 2014. Data collected includes: (1) CERCLIS site information as of the end of FY 2011; and (2) 2007-2011 American Community Survey (ACS) census data. Site data from FY 2011 was chosen to correspond most closely to the census data in the 2007-2011 ACS. In FY 2011 this included 1,408 Superfund Remedial Program sites in the 50 U.S. states with accurate locational data. A circular site boundary, equal to the site acreage, was modeled around the latitude/longitude for each site and then a 3 mile buffer ring was placed around the site boundary. Census data was then collected for each block group whose centroid fell within the 3 mile area.

Superfund cleanup actions increase the nation's welfare by protecting human health, restoring ecosystems, improving land productivity at formerly contaminated sites, and creating jobs and associated tax revenue in affected communities. The human health benefits of remediating contaminated sites include reduced mortality and reduced morbidity risk from asthma, nausea, cancer, birth defects, adverse reproductive or developmental disorders, and other illnesses or injuries. For example, in a recent paper, Columbia University, Massachusetts Institute of Technology (MIT), and UC Berkeley researchers found that Superfund cleanups correlate with reduced incidence of congenital anomalies by approximately 20 to 25 percent for those living within 5,000 meters of a site.<sup>2</sup>

The human health threats addressed by Superfund cleanups include lead contamination of residential soil, which can cause elevated blood levels in children. Research shows that blood lead levels above 5 µg/dL can result in irreversible neurological deficits in young children, (including lowered intelligence, attention-related behavioral problems, and poor academic achievement) as well as adverse effects in other organ systems.<sup>3</sup> Blood lead studies at five Superfund sites have shown a reduction in the average blood lead levels in children from above 5 µg/dL<sup>4</sup> to below 5 µg/dL following Superfund cleanup and environmental education efforts. For example, in 1999, the EPA began excavating and replacing soil at child-care facilities and residential properties in eastern Omaha that were contaminated with lead through airborne emissions from historic lead smelting and refining operations in the area.<sup>5</sup> Efforts at the Omaha site to reduce exposure to lead contaminated soil had a significant result on blood lead levels in that community. In 1994, approximately 33 percent of all children tested in Douglas County had a blood lead level of 10 µg/dL or higher. In 2006, the percentage of children tested with elevated blood lead levels (10 µg/dL or higher) had decreased to about 4 percent.

Ecosystems also are improved by addressing pollutants from contaminated sites and protecting drinking water supplies or fishery habitats. For example, at the Anaconda Smelter site in Montana, the Superfund program has reconstructed wetlands and re-vegetated slopes to reduce exposure to windblown dust and lower contaminant load into the ground water and area streams. As a result, in addition to addressing risks to human health, the remedy is improving aquatic life and has promoted the return of moose and antelope to their traditional wildlife habitat.

Promoting a sustainable future for communities is a major element of redevelopment activities at Superfund sites. This is accomplished by engaging communities in site cleanup decisions, turning contaminated sites into community assets, fostering employment opportunities in communities where sites are cleaned up, protecting green infrastructure, redeveloping blighted areas, and protecting human health and the environment. By working with communities and partners across the country to make sure sites are safe for use, the EPA is making a visible difference helping transform sites into community assets. Some claim that being near a

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<sup>2</sup> Currie, J., M. Greenstone and E. Moretti. 2011. "Superfund Cleanups and Infant Health." NBER Working Paper 16844.

<sup>3</sup> 2012 National Toxicology Program Monograph Health Effects of Low-Level Lead.

[http://ntp.niehs.nih.gov/NTP/ohat/Lead/Final/MonographHealthEffectsLowLevelLead\\_NewISSN\\_508.pdf](http://ntp.niehs.nih.gov/NTP/ohat/Lead/Final/MonographHealthEffectsLowLevelLead_NewISSN_508.pdf)

<sup>4</sup> 2012, Advisory Committee on Childhood Lead Poisoning Prevention Recommendations in "Low Level Lead Exposure Harms Children: A Renewed Call of Primary Prevention". <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6120a6.htm>

<sup>5</sup> [http://www.epa.gov/region07/factsheets/2009/final\\_record\\_decision\\_omaha\\_lead\\_superfund\\_omaha\\_ne\\_200905.htm](http://www.epa.gov/region07/factsheets/2009/final_record_decision_omaha_lead_superfund_omaha_ne_200905.htm)

Superfund site jeopardizes development, reduces property values, and costs jobs. However, more than 680 NPL sites have new, continued or planned reuse, meaning that communities receive the benefits of job creation, increased property values, enhanced local tax bases, and improved quality of life. According to a recent study<sup>6</sup> by economists at Duke University and the University of Pittsburgh, properties within 3 miles of Superfund sites experience an 18.7 percent to 24.4 percent increase in value when sites are cleaned up and deleted from the NPL. For example, three sites that gathered national attention in the early history of the program have become community assets. The Times Beach site outside of St. Louis, Missouri is now an active state park.<sup>7</sup> The Industri-Plex and Wells G&H sites in Woburn, Massachusetts, which were the basis of the book and movie “A Civil Action,”<sup>8</sup> have been transformed into an urban transportation center, and a home for several large and small businesses.<sup>9</sup> Based on 2012 data at 319 Superfund sites with some kind of reuse occurring, approximately 1,040 businesses were operating and generating annual sales of \$20 billion and employing over 44,000 people earning a combined income of \$3.4 billion.<sup>10</sup>

Recent examples of the economic value that can be generated by reusing Superfund sites include the redevelopment that has occurred at the Universal Oil Products (Chemical Division) Superfund site in Bergen County, New Jersey and at the Del Amo Superfund site in Los Angeles, California. The Universal Oil Products site is now home to local shopping amenities and the Sports Line, a commuter rail line extension that connects the site and available parking with a local sports stadium. Onsite businesses support about 254 jobs and contribute more than \$8 million in annual employment income to the local community. The Del Amo Superfund site is now a dynamic industrial and commercial area home to many businesses. The onsite land uses at the Del Amo site support nearly 7,000 jobs and contribute nearly \$400 million in annual employment income to the local community. In 2012, more than 300 businesses were operating at the site and they generated \$8.6 million in local property tax revenues. The total market value of the land and onsite improvements was over \$590 million in 2012.

The following chart is a high-level depiction of Superfund remedial site activity that shows how sites progress through the remedial pipeline from site assessment through NPL deletion. Later sections describe the Superfund program workload throughout each phase of the pipeline.

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<sup>6</sup> Shanti Gamper-Rabindran and Christopher Timmins, “Does Cleanup of Hazardous Sites Raise Housing Values? Evidence of Spatially Localized Benefits” *Journal of Environmental Economics and Management*, In Press, Corrected Proof, December 22, 2012.

<sup>7</sup> [http://www.epa.gov/superfund/programs/recycle/live/region7\\_mo.html](http://www.epa.gov/superfund/programs/recycle/live/region7_mo.html)

<sup>8</sup> *A Civil Action*, dir. by Steven Zaillian (1998; Touchstone, 1999 dvd)

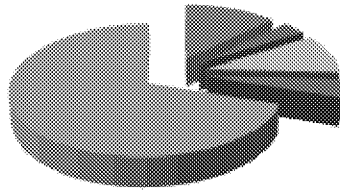
<sup>9</sup> <http://www.epa.gov/superfund/programs/recycle/pdf/wellsgh-success.pdf>

<sup>10</sup> The economic data provided for the 319 Superfund sites known to be in revenue-generating reuse was collected during the months of July and August 2012. Economic data, including annual sales, number of employees and annual employment income, were collected from the Hoovers Dun & Bradstreet database and from Manta.com. <http://www.epa.gov/superfund/programs/recycle/impacts.html#national>

## All Superfund Site Activity (Includes Federal Facilities)

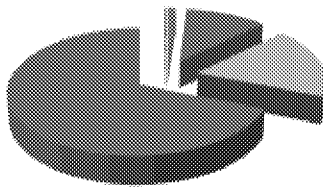
### Site Assessment Accomplishments (51,658)

- Pre-Screened from Active CERCLIS Inventory - 6540
- NPL - 1685
- Needs Non-NPL Response - 5091
- Site Assessment Needed - 2902
- No Federal Superfund Interest - 36024



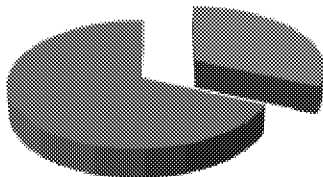
### 1,685 NPL Sites (1,313 Final, 372 Deleted)

- Study Pending - 20
- Study Design - 195
- Construction Underway - 310
- Construction Completed - 1136
- Deleted/Deferred - 4



### 1,156 Construction Completed Sites

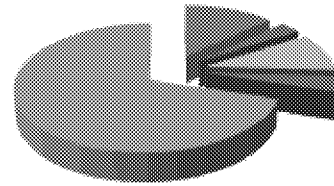
- CC and Deleted - 368
- CC and not Deleted - 788



## EPA- & PRP-Lead Site Activity (Excludes Federal Facilities)

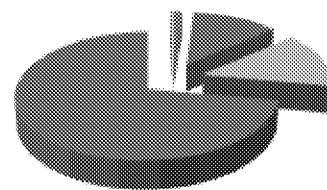
### Site Assessment Accomplishments (49,124)

- Pre-Screened from Active CERCLIS Inventory - 6337
- NPL - 1511
- Needs Non-NPL Response - 4838
- Site Assessment Needed - 1943
- No Federal Superfund Interest - 34495



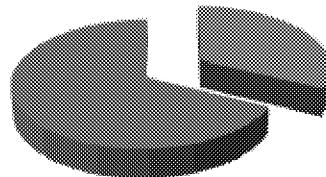
### 1,511 NPL Sites (1,156 Final, 355 Deleted)

- Study Pending - 19
- Study Design - 186
- Construction Underway - 218
- Construction Completed - 1084
- Deleted/Deferred - 4



### 1,084 Construction Completed Sites

- CC and Deleted - 301
- CC and not Deleted - 783



- Study Pending-Sites that have been listed to the NPL where no RI/FS work has begun
- Study or Design-NPL sites where the most advanced action at the site has, at a minimum, started RI/FS work but where no construction has begun.
- Construction Underway-NPL sites where the most advanced action at the site has, at a minimum, started RA work and where the site is not yet construction complete.
- Construction Completed-Sites where construction is complete; in some instances RA projects may continue after construction completion has been achieved.
- Data in CERCLIS as of 11/8/13

For more information about the Superfund Remedial program, please refer to <http://www.epa.gov/superfund>.

## FY 2015 Activities and Performance Plan:

The Superfund Remedial program's top priority remains protecting the American public by reducing risk to human health and the environment. The agency continues to place a priority on achieving its goals for the two key environmental indicators, Human Exposures Under Control (HEUC) and Groundwater Migration Under Control (GMUC). While continuing to rely on the agency's Enforcement First approach to encourage PRPs to conduct and/or pay for cleanups, the Remedial program focuses on completing ongoing projects and maximizing the use of site-specific special account resources.<sup>11</sup> The agency also will emphasize cleaning up sites to foster site reuse, which reflects the high priority that the EPA places on land revitalization as an integral part of the agency's mission for the Superfund program. In addition, the agency is instituting changes to contracting practices (such as the strategic sourcing effort) that aim to achieve a minimum of a five percent reduction in contracting costs and to create efficiencies that will be applied toward increasing the pace of cleanups. The agency will continue in FY 2015 to apply lessons learned from conducting a series of project management pilots under the Integrated Cleanup Initiative (ICI) and the Superfund Program Review. Finally, as part of the FY 2015 agencywide effort to become a higher performing organization, the Superfund Remedial program will support LEAN efforts in addition to working with agency programs on new business practices and processes to increase efficiency and reduce costs while retaining or enhancing environmental benefits.

The FY 2015 Superfund Remedial program request represents an increase of over \$43.4 million and a reduction of 8.7 FTE from the FY 2014 Enacted budget. The agency will apply the resources across the remedial site cleanup pipeline to advance site work that has been delayed due to previous budget reductions. Funding will be provided to conduct remedial site assessments at sites in the existing site assessment backlog, reducing the backlog by an additional 100 sites. In addition, the EPA estimates it will be able to start three more remedial investigation/feasibility study (RI/FS) and remedial design (RD) projects. Funding also will be provided to initiate cleanup construction work at four to six construction projects, leaving a backlog of new EPA-financed construction projects of more than 30 by the end of FY 2015. The Remedial program is working to balance funding site work with effective federal oversight.

In FY 2015, the Remedial program's site cleanup outputs may rise slightly, but achieving several performance measure targets will remain a challenge due to the lagging effects of resource reductions. Accordingly, the Remedial program is slightly reducing projected accomplishments for four out of six of its performance measure targets (e.g., Construction Completions, HEUC, GMUCI, and Site-Wide Ready for Anticipated Use (SWRAU) from FY 2014 levels.

This section discusses the stages of review and action that sites follow when addressed through the Superfund Remedial program.

### ***1) Site Assessment & NPL Additions***

The site assessment component of the Superfund Remedial program performs the critical function of screening sites for contamination and developing the most appropriate approach for cleanup. In FY 2015, the Remedial program expects to perform 850 remedial site assessments, of which approximately one-half will be conducted by states and tribes through cooperative

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<sup>11</sup> Special account resources are funds EPA receives from PRPs through settlements and must be used site-specifically.

agreement funding. This level of activity will ensure the EPA and its state, Tribal, and federal partners are made aware of new sites and emerging categories of sites posing potential threats to human health and the environment. The types of assessment activities will range from pre-screening readily available information at new sites to collecting sample and other data at existing sites to determine whether remedial cleanup attention may be needed. As necessary, these activities include preparing documentation records for sites being proposed to the NPL.

Since its inception in December 1980, the Superfund Remedial program and its state, Tribal, and federal partners have screened or assessed more than 51,000 federal and non-federal potentially contaminated sites. 82 percent of these sites have been pre-screened or assessed and determined to not need Superfund cleanup. Approximately 10 percent of these sites need cleanup attention and have been referred to other state, Tribal, and federal cleanup programs. Only 3 percent (1,694)<sup>12</sup> of the sites assessed since the beginning of the program have been determined to be among the most contaminated sites in the country and have been added to the NPL. The remaining sites require initial or additional assessment to determine if cleanup may be necessary.

The EPA uses the site assessment function to determine the best approach to address potentially harmful sites, including adding them to the NPL. Other cleanup approaches that may be selected at the conclusion of assessment work include deferral or referral to the following: state/Tribal cleanup programs such as state voluntary cleanup programs, the EPA's Superfund Removal program, state corrective action and waste management programs, and the Nuclear Regulatory Commission. Non-NPL cleanups have been implemented at approximately 5,000 sites assessed by the Remedial program to date. A recent study conducted by the Association of State and Territorial Solid Waste Management Officials of 28 states found that close to 40 percent of sites assessed in those states with federal funding are ultimately cleaned up through state programs.<sup>13</sup> Therefore, limited federal site assessment resources leverage state and other resources in order to achieve protective cleanups.

At the beginning of FY 2015, the EPA expects that approximately 2,050 sites will need initial or additional assessment and, based on recent trends, the EPA expects 300 new sites will be submitted to the Remedial Assessment program by citizens, states, Tribes, other federal agencies, and other sources over the course of the year. Based on historical evidence, the EPA expects the following results from its expected completion of 850 remedial assessments in FY 2015. The NPL, including current sites on the NPL and sites that have been deleted, totals 1,694 sites. The agency estimates that it will add between 10 and 20 sites to the NPL in FY 2015.

<b>Remedial Assessment Results</b>	<b>Estimated Distribution of FY 2015 Accomplishments<sup>14</sup></b>
Sites directed to states/tribes for any further attention	64%
Site needs more complex assessment	26%

<sup>12</sup> Please refer to <http://www.epa.gov/superfund/sites/npl/index.htm> for additional information.

<sup>13</sup> Please refer to [http://www.astswmo.org/Files/Policies\\_and\\_Publications/CERCLA\\_and\\_Brownfields/2012.03.19-Site\\_Eval-Phase\\_II\\_Report-FINAL.pdf](http://www.astswmo.org/Files/Policies_and_Publications/CERCLA_and_Brownfields/2012.03.19-Site_Eval-Phase_II_Report-FINAL.pdf) for additional information.

<sup>14</sup> Percentages based on FY2013 accomplishment results as of November 8, 2013

Site needs remedial study/cleanup via the NPL or other cleanup approach	10%
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Building on the work from the ICI, the EPA also will continue to increase public access to assessment information in FY 2015. This will include enhanced access to performance data so the public can better understand what assessment work has been completed and what is still needed, as well as adding transparency to the EPA decision-making process within the remedial site assessment program. In addition, an EPA, state, and Tribal site assessment workload coordination cost savings guide is being developed to prevent duplication of efforts.

In order to reflect the science that has evolved over the past two decades to help protect public health, in FY 2015 the EPA will continue to pursue incorporating the subsurface vapor intrusion exposure pathway into agency site assessment guidance and expects to propose revisions to the Hazard Ranking System (HRS). Because the science regarding the risks posed by exposure to vapor intrusion in buildings did not exist in the 1980s when CERCLA was passed, this potential pathway has not yet been accounted for in placing sites on the NPL. Subsurface intrusion sites have the potential to pose a higher level of risk than other exposure routes. The EPA does not expect the net number of site assessments to increase due to any updated guidance or revisions to the HRS but, rather, that all known exposure pathways will be properly addressed.

For more information on the Superfund remedial assessment process, please refer to [http://www.epa.gov/superfund/programs/npl\\_hrs/siteasmt.htm](http://www.epa.gov/superfund/programs/npl_hrs/siteasmt.htm)

## ***2) Site Characterization and Remedy Selection***

After a site is placed on the NPL, it must be investigated, risks evaluated, and a remedy selected to address the threats and risks posed by the site. Remedy selection decisions are documented in Records of Decision (RODs) and amended RODs.

In FY 2015, the EPA will continue to maintain focus on completing existing work and expects to use the additional funds in FY 2015 to increase the number of new EPA-lead RI/FS actions from FY 2014 projected levels. The RI/FS ongoing project estimates have continued to decrease due to focus on project completions. Over the longer term, there will be fewer projects ready for the RD phase discussed in the next section.

Under the ICI, there have been several productive efforts that will contribute significantly to improved site characterization, documentation of remedy selection, and pace of cleanups. For example, in FY 2012 the program streamlined the review processes of both the National Remedy Review Board (NRRB) and the Contaminated Sediments Technical Advisory Group (CSTAG) by improving review coordination by the different boards, increasing opportunity for stakeholder input and the transparency of board findings. This improvement will lead to finalizing and signing RODs more efficiently. In FY 2013, detailed training specific to improving decision documents, was developed and conducted. Additionally, applying lessons learned from remedial action optimization work, the program has expanded its technical support agenda, training activities, and analytical tools to earlier phases of the cleanup process. Such actions can minimize potential remedy performance issues, thus enhancing efficiency.

Remedial Investigations/Feasibility Studies	Fiscal Year Actuals/Estimates		
	FY 2013 Actual Accomps	FY 2014 Est. (CJ)	FY 2015 Est.
RI/FS Ongoing Projects (EPA)	241	220	210
RI/FS Ongoing Projects (PRP)	279	260	250
<b>Total Ongoing Projects</b>	<b>520</b>	<b>480</b>	<b>460</b>
RI/FS Starts (EPA)	19	15	18
RI/FS Starts (PRP)	13	15-20	15-20
<b>Total RI/FS Starts</b>	<b>32</b>	<b>30-35</b>	<b>32-38</b>
<b>RODs/ROD Amendments – EPA/PRP-Lead</b>	<b>41</b>	<b>50-55</b>	<b>35-40</b>

### 3) Remedial Design and Construction

After a remedy has been selected and before selected remedies can be built, design plans to guide the construction are needed. The RD provides the technical specifications for cleanup remedies and technologies that include a series of engineering reports, documents, specifications, and drawings detailing the steps to be taken to meet the goals established in the ROD. The RD also may include sampling, pilot tests, and treatability studies.

In FY 2015, the EPA will continue to maintain focus on completing existing work and expects to use the additional funds in FY 2015 to increase the number of new EPA-lead RD actions from FY 2014 projected levels.

Remedial Design	Fiscal Year Actuals/Estimates		
	FY 2013 Actual Accomps	FY 2014 Est. (CJ)	FY 2015 Est.
RD Ongoing Projects (EPA)	101	80	65
RD Ongoing Projects (PRP)	142	120	115
<b>Total RD Ongoing Projects</b>	<b>243</b>	<b>200</b>	<b>180</b>
RD Starts (EPA)	25	15	18
RD Starts (PRP)	31	25	25
<b>Total RD Starts</b>	<b>56</b>	<b>40</b>	<b>43</b>
RD Completions (EPA)	28	30	30
RD Completions (PRP)	33	30	30
<b>Total RD Completions</b>	<b>61</b>	<b>60</b>	<b>60</b>

Following the RD, construction or implementation of the cleanup remedy, called the Remedial Action (RA), is performed by the EPA (or states with agency resources) or PRPs under EPA or state oversight. A given remedy may contain multiple actions or projects<sup>15</sup> that address discrete areas of contamination, such as groundwater remediation projects that are distinct from soil

<sup>15</sup> Projects represent discrete actions taken to implement a site cleanup remedy as described in the Record of Decision. They are typically defined to address discrete problems, such as specific media (e.g., groundwater contamination), areas of a site (e.g., discrete areas of contamination), or particular technologies (e.g., soil vapor extraction). A given remedy may contain multiple actions or projects depending on the nature of the remedy selected.



remediation projects. Funding for EPA Superfund construction projects is critical to achieving risk reduction and restoration of contaminated sites to allow productive reuse.

The Remedial program's budget cannot support funding all the construction projects that are ready to start. Consequently, the EPA will continue to focus on completing ongoing construction projects and expects to start only a limited number of EPA-lead new construction projects during FY 2015. The cumulative effect of funding reductions in recent years, combined with funding needs for new projects, will potentially delay the initiation of construction work at more than thirty projects by the end of FY 2015.

Of the sites that will make up the universe of potential unfunded construction projects by the end of FY 2015, the program estimates that almost half of the sites will have potential environmental justice concerns. In general these communities have fewer resources with which to address concerns about their health, well-being, and environment. The delay in risk reduction and restoration of contaminated sites in their communities from unfunded NPL construction projects adds to that burden.

The Remedial program estimates that the EPA will accomplish 105 (including federal facility-lead) RA project completions in FY 2015, a reduction of 10 from the FY 2014 target. The RA completion measure augments the long-standing site-wide construction completion measure as an interim measure of progress toward making sites ready for reuse and achieving long term cleanup goals. In FY 2015, the EPA will work to achieve site-wide construction completion at 13 sites, including federal facility-lead sites. As of end of FY 2013, the cumulative total of sites that have achieved construction complete is 1,156.

Remedial Action (RA) and Construction Completion (CC)	Fiscal Year Actuals/Estimates		
	FY 2013 Actual Accomps	FY 2014 Est. (CJ)	FY 2015 Est.
RA Ongoing Projects (EPA)	138	100	90
RA Ongoing Projects (PRP)	321	315	305
<b>Total RA Ongoing Projects</b>	<b>459</b>	<b>415</b>	<b>395</b>
RA Starts (EPA)	16	TBD	TBD
RA Starts (PRP)	41	40	40
<b>Total RA Starts</b>	<b>57</b>	<b>TBD</b>	<b>TBD</b>
RA Completions (EPA)	26	30	30
RA Completions (PRP)	48	40	40
<b>Total RA Completions</b>	<b>74</b>	<b>70</b>	<b>70*</b>
<b>Construction Completions (CC)</b>	<b>14</b>	<b>15</b>	<b>13</b>

\*Figure does not include Federal Facilities

#### ***4) Post-Construction (Long-term Response Actions, Five Year Reviews and Site Deletions)***

Long-term response actions (LTRAs) are post-construction activities (often pumping and treating groundwater after a treatment plant has been constructed) that are intended to restore ground or surface water to a level that assures protection of human health and the environment (e.g.,

restoring a contaminated aquifer to drinking water quality). Such activities may last decades, and CERCLA allows the EPA to fund an LTRA for up to 10 years. Once this period of time has elapsed, the state in which the site is located must take responsibility for continuing to operate and maintain the system.

In FY 2015, the EPA expects to transfer responsibility for 10 LTRAs to states where the EPA's performance obligations are complete. The program also expects the number of ongoing LTRAs to remain the same as Fund-lead remedial actions in FY 2014 as remedial actions continue to complete and the EPA takes on responsibility for new LTRAs.

During FY 2015, the EPA plans to conduct more than 200 Five-Year Reviews (FYRs) at sites with waste left in place above levels that allow for unlimited use. FYRs are used to evaluate the implementation and performance of all components of the implemented remedy and to determine whether the remedy remains protective of human health and the environment.

The Remedial program will encourage regional offices to work with states and other federal agencies, as appropriate, to delete sites or parts of sites from the NPL where sites have met the statutory requirements for deletions. More deletions may facilitate SWRAU determinations and promote reuse.

Post-Construction	Fiscal Year Actuals/Estimates		
	FY 2013 Actual Accomps	FY 2014 Est. (CJ)	FY 2015 Est.
<b>Total Ongoing Long Term Response Actions</b>	<b>368</b>	<b>340</b>	<b>340</b>
<b>Five Year Review Completions (EPA and PRP Lead)</b>	<b>236</b>	<b>207</b>	<b>207</b>
<b>NPL Partial Deletions</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>NPL Final Deletions</b>	<b>7</b>	<b>13</b>	<b>13</b>

### **5) Environmental Indicators**

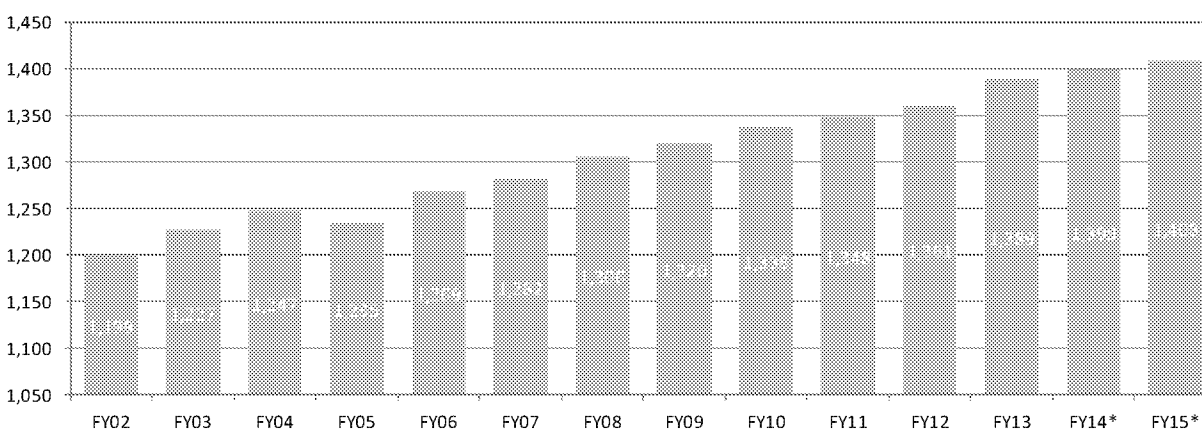
The HEUC performance measure documents the number of NPL sites at which the agency has brought human exposures to harmful chemicals under control, while the GMUC performance measure documents whether contamination in groundwater is within safe levels, or whether there is no movement of groundwater contamination.

In FY 2015, the agency plans to achieve control of all identified unacceptable human exposures at 9 additional sites, bringing the program's cumulative total of HEUC sites to 1,408. Additionally, the agency expects to achieve GMUC at 13 additional sites, bringing the program's cumulative total to 1,119 sites.

Actions taken to achieve HEUC include, but are not limited to: reducing exposure to unsafe drinking water by providing alternate water supply to affected communities; protecting children from lead-contaminated soil around their homes through soil removal; and reducing exposure to indoor air contaminated by harmful vapors by installing mitigation systems in homes. As can be

seen in the graph below, the Superfund Remedial program is making significant progress at controlling unacceptable human exposures while longer-term cleanup progresses. Between FY 2002 and FY 2013, the number of Superfund remedial sites designated as having human exposure under control has increased by 190 sites. Based on current targets, by FY 2015 the number of Superfund sites achieving human exposure under control will total 1,408 sites. In earlier years, the program routinely exceeded the annual HEUC target. Recently, it has become more challenging. The universe of sites from which accomplishments can be drawn is smaller because the program has been making progress at moving sites into the Under Control category. Further, the size and complexity of the remaining sites often necessitate years of cleanup. In addition, factors such as vapor intrusion can slow the pace at which sites move into the Under Control category.

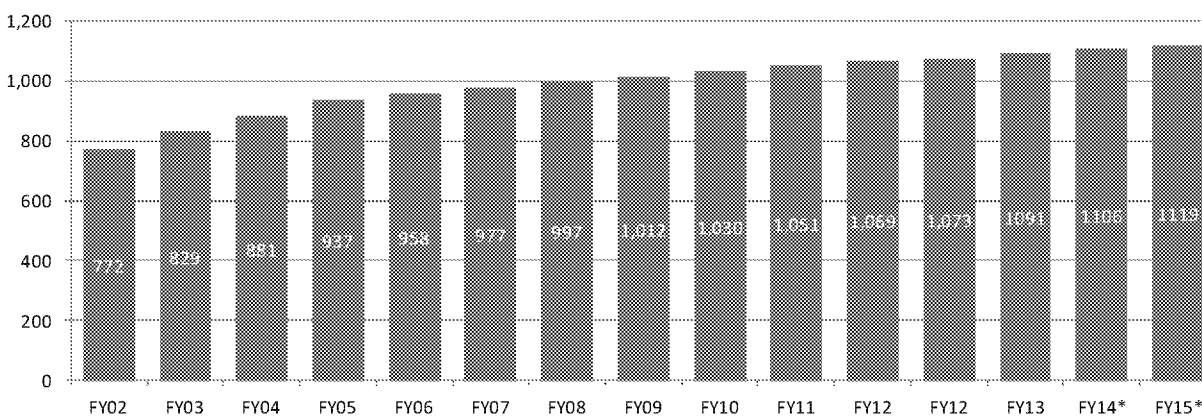
**Cumulative Number of Superfund Sites with Human Exposure Under Control from FY2002 to FY2015**



\*Estimated Achievements for FY 2014 and FY 2015 based on current targets.

Actions to achieve GMUC include controlling the migration of contaminated groundwater through engineered remedies or natural processes. This environmental indicator also is an evidence-based program performance measure. It demonstrates the program's evaluation of real-time data related to the spread of contaminated groundwater plumes and the agency's actions in controlling them. As can be seen in the graph below, the Superfund remedial program is making significant progress at controlling the migration of contaminated groundwater. Between FY 2002 and FY 2013 the number of Superfund sites achieving groundwater migration under control increased by 319 sites. Based on current targets, by 2015 the number of groundwater sites under control will total 1,119 sites. As with the human exposure targets, in earlier years, the program routinely exceeded the annual GMUC target. Recently, progress has been more challenging for the same reasons listed above with HEUC. Further, at many of the remaining sites the program is dealing with very large areas of contamination and multiple plumes. These sites often need many years of cleanup before the agency can declare that all plumes are stabilized site wide.

### Cumulative Number of Superfund Sites with Groundwater Migration Under Control from FY 2002 to FY 2015



\*Estimated Achievements for FY 2014 and FY 2015 based on current targets.

#### 6) *Site Reuse*

In FY 2015, the EPA expects 55 additional sites will qualify as SWRAU, bringing the program's cumulative total to 781 sites that are ready for reuse. To be eligible for the SWRAU performance measure, a site must be construction complete, all cleanup goals that impact future use must be achieved, and all required institutional controls must be put in place.

The SWRAU measure reflects the priority that the EPA places on land revitalization as an integral part of the agency's mission for the Superfund program, as well as the priority that the EPA now places on post-construction activities at NPL sites. As part of the cleanup process, the EPA works with communities to understand likely future land uses and integrates those considerations into cleanup plans. The agency also works with communities to address barriers to reuse, to implement institutional controls that protect current and future users, and to ensure long-term stewardship of remedies.

#### *Actions to Improve Program Effectiveness*

##### 1) *Superfund Program Review*

In November 2012, the Superfund Remedial program initiated a comprehensive review of its operations to identify options to maintain its effectiveness in achieving its core mission of protecting human health and the environment in the face of diminishing funding availability. The review builds on recommendations from the 2010 ICI, incorporates actions from ongoing efforts, and includes newly developed ideas. Several areas are being considered in this Program Review to capture important technical developments in the cleanup process, as well as innovations in remedial project management. The Superfund Program Review action plan was finalized on November 24, 2013 and EPA is now in the process of developing and implementing many of the 49 actions included in the plan.<sup>16</sup>

<sup>16</sup> [http://www.epa.gov/superfund/cleanup/pdfs/Final\\_SPR\\_Action\\_Plan-11\\_26\\_2013\\_\(2\).pdf](http://www.epa.gov/superfund/cleanup/pdfs/Final_SPR_Action_Plan-11_26_2013_(2).pdf)

## ***2) Optimizing Site Cleanups***

During FY 2015, the agency will continue to emphasize the use of optimization reviews of cleanups at Superfund sites. In 2012, the program issued its “National Strategy to Expand Superfund Optimization Practices from Site Assessment to Site Completion” (the “Optimization Strategy”) and has subsequently increased optimization work from 5-10 sites per year to well over 30 (the agency conducted optimization work at 34 Superfund sites in 2013). The goals of optimization include the following: more cost-effective expenditure of Superfund dollars, a reduced energy/carbon footprint, improved remedy performance, protection of human health and the environment, expedited consensus, improved decision-making, and acceleration of the pace of project/site completion. Optimization recommendations tend to focus on reducing operating and project management costs, creating more efficient monitoring networks, and identifying treatment options for source contamination to reduce clean up timeframes or improve remedy protectiveness. Furthermore, the Optimization Strategy encourages overarching changes to Superfund business practices through more frequent and routine assessment of site cleanup progress, technical performance and costs; and improved acquisition and contracts management strategies to ensure that efficiencies are achieved throughout the cleanup lifecycle.

The “Ground Water Remedy Optimization Progress Report: 2010-2011”<sup>17</sup> provides an indication of some of the costs avoided through optimization. For example, at the 10th Street Superfund Site in Nebraska, the EPA reduced monitoring costs from approximately \$250 thousand per year to \$124 thousand per year and project management and engineering support costs from approximately \$275 thousand per year to \$190 thousand per year. At the Pemaco Superfund Site in California, the EPA reduced monitoring costs from approximately \$443 thousand per year to \$230 thousand per year. As implementation of optimization recommendations progresses at sites, the program will continue to benefit from more effective, protective and technically efficient remedial strategies.

## ***3) Contracts Improvement Efforts***

The agency is instituting changes to contracting practices (such as the strategic sourcing effort) that aim to achieve a minimum of a five percent reduction in contracting costs in FY 2015. The agency also is developing a contracting strategy to guide the acquisition of services in the Superfund program. The strategy, known as the “Remedial Acquisition Framework,” outlines the acquisition approach for the next round of remedial contracts and includes contracts at the national level and in each regional office. Key components of the new strategy are developing strategic sourcing contracts that will incorporate fair opportunity requirements. It is anticipated that the inclusion of fair opportunity processes will encourage innovation and competitive pricing. In addition, opportunities for small businesses will be maintained at the regional office contracting level.

The EPA will begin implementing the Remedial Acquisition Framework in FY 2015. In addition, the program will build on the lessons learned from the Superfund Remedial program’s ICI, such as early constructor involvement, increased communication, partnering and planning,

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<sup>17</sup> [http://www.epa.gov/superfund/cleanup/postconstruction/pdfs/1011\\_optimization\\_report.pdf](http://www.epa.gov/superfund/cleanup/postconstruction/pdfs/1011_optimization_report.pdf)

or phased tasking of remedial investigation projects. These changes will improve performance, increase opportunities for optimization, and enhance contract award opportunities for small and socio-economically disadvantaged businesses, thus helping to meet agency socio-economic goals.

#### ***4) Community Involvement***

The Superfund community involvement efforts support the agency's commitment to expand the conversation on environmentalism. Superfund sites are located in communities across America. At each of these sites, community involvement efforts are engaging community members in discussions about harmful emissions, leaking landfills, contaminated properties, and toxic chemicals in their environment. Through the program's efforts, communities that have not traditionally been active in environmental issues are becoming aware, and adding their voices and efforts to strengthen the protection of human health and the environment.

#### ***5) Contract Laboratory Program***

In FY 2015, the Contract Laboratory Program (CLP) will seek to reduce the extramural cost per laboratory analysis and administrative workload on EPA staff by 3 percent from FY 2012 levels. To realize these savings the program will focus on five key priority areas. These are: 1) fully implement and complete the Combined Analytical Services Contracts (CASC) effort which streamlines and consolidates current CLP contracts; 2) complete implementation efforts for nearly paperless operations and enhanced electronic data transmission and evaluation; 3) continue the use of regional office CLP allocation strategies; 4) increase the use of special account resources for analytical services; and 5) evaluate all aspects of contract support to find efficiencies, reduce non-essential services and create more efficient business processes.

The CLP is a proven, reliable resource for providing high volume, cost effective analytical services that produce data of known and documented quality for EPA Superfund site managers. This national approach leverages the economies of scale to deliver routine analyses at a cost that is less expensive than our regional offices could independently obtain contracting for similar services. By focusing on the five key areas described above, the program estimates that savings will be realized across a broad spectrum of activities. These include reduced contract management workload associated with the administration of multiple analytical laboratory contracts, reduced costs for analytical result deliverables, greatly reduced/eliminated costs associated with hard-copy records retention, and reduced data validation and verification costs due to enhanced data assessment capabilities.

#### ***6) Superfund Enterprise Management System (SEMS)***

The deployment of the new Superfund Enterprise Management System (SEMS), in FY 2014, will complete a multi-year effort to consolidate several standalone information systems and reporting tools. By the start of FY 2015, the legacy systems will be fully decommissioned, and the program expects to see efficiencies and administrative cost reductions as a direct result. SEMS will allow the program to improve the planning, tracking, and reporting of key performance measures in order to provide valuable evidence of outcomes and results. Expanded

analytical components of the system also will provide additional functionality when performing data analyses.

The newly integrated system will establish a direct link between program accomplishments and relevant supporting documentation, thereby achieving substantial improvements in the program's records management approach. SEMS will be a certified records management system, which will ultimately allow the Superfund program to move to electronic recordkeeping consistent with the November 2011 Presidential Memorandum "Managing Government Records." SEMS also will enhance access to program records through an improved web-based interface that efficiently stores information in a central repository for on-demand display through public web sites. These new capabilities will improve accessibility to the documentary evidence that supports key programmatic decisions, thereby supporting future evaluations by both internal and external stakeholders.

### **Performance Targets:**

The Superfund Remedial program reports its activities and progress toward long-term human health and environmental protection via six performance measures that encompass the entire cleanup process. In FY 2015, the program is reducing targets for four of its six performance measures from FY 2014 levels. The target for remedial action completions is being reduced to 105 (from 115 in FY 2014), construction completions are reduced to 13 (from 15 in 2014), human exposure under control to 9 (from 10 in 2014) and ground water migration under control to 13 (from 15 in 2014). The remedial site assessment completions target will increase to 850 while the site-wide ready for anticipated use target will remain the same as in FY 2014 at 55.

Note: Performance goals for the Superfund Federal Facilities Response program are a component of the Superfund Remedial program's measures.

### **FY 2015 Change from FY 2014 Enacted Budget (Dollars in Thousands):**

- (+\$4,830.0) This increase reflects the recalculation of base workforce costs due to adjustments in salary and benefit costs.
- (+\$39,780.0) This realignment requests critical resources to apply across the remedial site cleanup pipeline to advance site work that has been delayed due to previous budget reductions. These resources will be provided to conduct remedial site assessments from the existing site assessment backlog, reducing the backlog by an additional 100 sites. In addition, EPA estimates it will be able to start three more RI/FS and RD projects. Finally, EPA plans to initiate cleanup construction work at four to six construction projects that have been on hold.
- (-\$1,210.0 / -8.7 FTE) The Agency is reviewing and redesigning many core business practices to be more efficient. This change includes a net reduction in FTE as part of an agencywide effort to streamline our business practices. The base resources include 0.2 FTE to support LEAN efforts under the Agency focus on becoming a High Performing

Organization (HPO). The net reduction includes 8.7 FTE and \$1,210.0 in associated payroll.

**Statutory Authority:**

The Superfund program was established by, and operates pursuant to, the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. sec. 9601 et seq., as amended, and Executive Order 12580 (January 23, 1987).